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OPERATOR'S INSTRUCTIONS
for the
ARMALITE AR-30 RIFLE

August 10, 2002

I. INTRODUCTION

Figure 1,
The AR-30 rifle

Description:

The AR-30 is a robust, front locked, manually loaded bolt action single-shot rifle chambered for a variety of cartridges. It is intended for hunting or target shooting.

The AR-30 is a finely made rifle, a sophisticated machine built for many years of reliable use. It consists of two major elements, the Barreled Action Assembly and the Stock Group. They are joined at a unique machine-rest style V-block interface. Accurate, repeatable bedding is formed by the engagement of the octagonal Receiver and the deep V channel in the aluminum Forestock.

The AR-30 uses a "single stack" magazine so that the receiver needs only a narrow opening to admit it. This leaves the receiver extremely stout, and conducive of good accuracy.

The rifle bears a magnesium phosphate finish on most steel surfaces, and hard anodizing on the aluminum surfaces.

Figure 2

The ArmaLite AR30 Muzzle Brake

The AR-30 can be equipped with an optional, extremely effective Muzzle Brake. It reduces recoil to a relatively mild shove. It is effective enough that even a small-statured shooter can fire the rifle with the powerful .338 Lapua Magnum cartridge, and most shooters will be able to spend long days at the range without discomfort.

The Muzzle Brake is held in place by both a lock ring and Loc-Tite. Don't remove it unless replacement or repair is necessary. Trying to force the Brake off without softening the Loc-Tite may unscrew the barrel!

II. SAFETY FIRST:

Always wear effective hearing protection. The AR-30 is extremely loud, especially if equipped with the muzzle brake. Wear hearing protection: foam plugs or good quality hearing protection muffs. Assure that spectators and other shooters within 100 yards of the firing point are also wearing hearing protection. *You are responsible for warning them that you are about to fire, and that the shot will be loud.*

Never fire an AR-30 chambered for the .338 Lapua Magnum after removal of the Muzzle Brake. The Muzzle Brake is an important safety device. It makes the rifle comfortable to shoot and, more importantly, prevents the rifle from recoiling hard enough to possibly injure the shooter.

Assure that the Muzzle Brake is firmly secured and undamaged. Make sure the Brake is screwed fully and firmly onto the Barrel. Make sure that all of the Brake Screws are in place and fully tightened. Never fire the rifle if a Screw is missing. Never shoot the rifle without the Blast Deflector (the heavy wings behind the brake) in place. Normal tolerances may allow the Deflector to be slightly loose.

Make sure that your backstop is fully capable of stopping the bullet.

Avoid muzzle blast. The AR-30's Muzzle Brake works by diverting muzzle gasses towards the rear. It is LOUD. Spectators should not stand within 25 yards of the Rifle, and should be especially careful not to stand in the area 30 to 90 degrees to either side of the Rifle. The best place to be is directly to the rear of the Rifle, shooting it.

Use only clean, high quality factory-loaded ammunition, in good condition. ArmaLite cannot condone the use of handloaded ammunition in the AR-30. Any such use voids any ArmaLite warranty.

Make sure that no cleaning patch or other obstruction is in the Barrel or Muzzle Brake. It may damage the Rifle or flying debris may injure somebody standing nearby.

Keep your ArmaLite in good hands… Yours! Keep it locked up and secure. Don't become the victim of a theft, or find your Rifle in the hands of anybody unworthy of it. Secure the Bolt separately, or lock the Rifle in a vault.

III. OPERATING INSTRUCTIONS

A. Controls and Indicators.

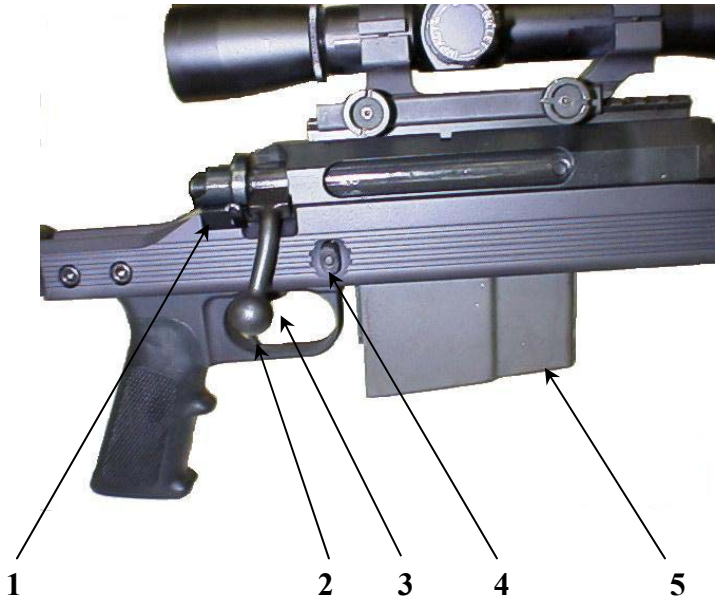


Figure 4
Operating Controls

1. Safety. The Safety is mounted at the right rear of the receiver. To engage the Safety, pull the Safety to the rear "safe" position. To place the Safety to "fire," push the Safety to the forward position.

2. Trigger. The Trigger is located within the Trigger Guard. It is of conventional, single stage design. Grasp the Grip with the right hand and pull the Trigger straight to the rear.

3. Bolt Handle. Lift the Bolt Handle to unlock the Bolt and pull the Bolt to the rear. Because the bolt handle is made short for easy handling when hunting, it will require considerable force to open it if the rifle is chambered for a magnum cartridge.

4. Magazine Catch Release Button. Push this button in to release the magazine from the receiver and stock group.

5. Magazine. The magazine is inserted into the opening in the bottom side of the stock. The magazine should be securely locked into the receiver/stock group by the magazine catch.

B. Maintenance and Safety Checks

1. Make sure that the Rifle is unloaded, and that the Bolt is to the rear.
2. Inspect the bore to make sure that there are no obstructions.
3. Inspect the Muzzle Brake to assure that it is tight, all screws are intact, and the Blast Deflector is in place.
4. Make sure the bolts holding the receiver to the stock are tight. You are now ready to insert a magazine, load and fire.

C. Loading and Firing

1. **Verify safety.** Make sure that the Rifle is pointed in a safe direction, towards a known, adequate backstop. Make sure that everybody within 100 yards knows that the rifle is about to be fired and protects their hearing.
2. If it's not already open, raise the Bolt Handle and pull the Bolt to the rear.
3. Place a Magazine into the Action through the magazine well with an upward motion until the magazine is locked in position.
4. Close the bolt to strip a cartridge off the magazine, chamber and lock the Cartridge. Push the Bolt forward so that the Extractor snaps over the case rim. You will feel some resistance as the Extractor is displaced over the rim of the cartridge. Turn the Bolt handle down completely.
5. Place the gun on safe by pulling the safety toward the rear of the gun.
6. Assume a good position behind the rifle. Make sure that the Butt-pad is in complete contact with the shoulder. Make sure that the cheek is well forward on the Cheek Rest.
7. Aim at the target and push the safety forward to the fire position
8. Pull the Trigger straight to the rear. You will know when the rifle fires.

Note: the AR-30 is equipped with a very secure manual Safety. ArmaLite recommends loading the rifle immediately before firing a shot instead of leaving the rifle loaded and on safe. As a practical target shooting measure, the Rifle should be considered safe only when it is unloaded and the action is open.

Emergency Procedures. If the Rifle fails to fire when the Trigger is pulled:

1. Wait 15 seconds to allow a possible "hangfire" to go off then...
2. Check to see if the Safety is engaged by mistake. If so, push the Safety forward to "fire" position, and fire.
3. If the rifle still doesn't fire, be cautious and assume the cartridge will discharge when the bolt is opened and *move from behind the action*. Wait another 15 seconds to allow a possible hangfire to discharge, and open the Bolt smartly and unload the Rifle.
4. Examine the Rifle carefully to identify the cause of the malfunction, and correct it.

MAINTENANCE INSTRUCTIONS

A. Disassembly.

1. Assure that the Rifle is unloaded, and engage the Safety.

Figures 6 and 7
Removing the Bolt Group

2. Remove the Bolt Group. Unlock the bolt and pull the bolt to the rear of the receiver. Depress the Bolt Catch (6) at the left rear of the Receiver and pull the Bolt Group to the rear and out of the Receiver. Further disassembly of the Bolt Group should be done only for repair or lubrication by a qualified service technician or gun smith .

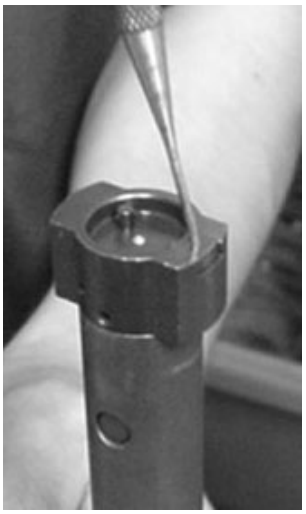
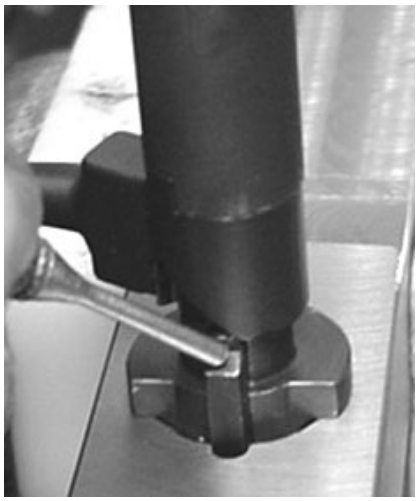


Figure 8
Removing the Extractor

3. Removing the Extractor. Use a small diameter pin punch to press the Extractor Plunger to the rear. At the same time, pull the Extractor straight out of the side of the Bolt. It helps to have three small hands or a few extra fingers. **Caution: The Extractor Spring Plunger is under spring pressure. Failure to control the Spring and Plunger may cause injury.**



Figures 9 and 10
Removing the Bolt Sleeve and Striker Group

4. Removing the Bolt Sleeve and Striker Group. Removing the bolt sleeve and striker group should not be attempted by anyone except a competent gunsmith who has been trained by the factory to do so. The Bolt is equipped with ArmaLite's Floating Bolt Head. It is intentionally designed to flex to assure that both lugs bear properly against their locking surfaces. **Caution: The entire Bolt Sleeve and Striker Group are under spring pressure. Failure to control the parts may result in injury. It should very seldom be necessary to disassemble these parts.**

6. Removing the Action Assembly.

Remove the telescopic sight from the receiver to prevent damage during handling.

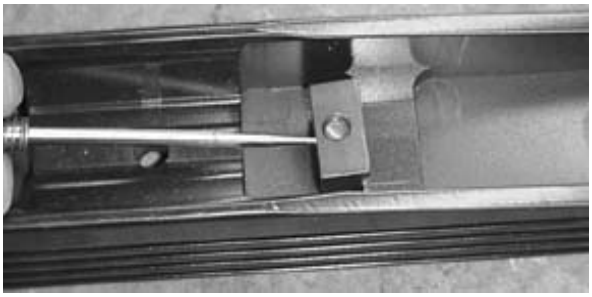


Figure 15
Loosening the Bedding Wedge

Loosen the Bedding Wedge at the front of the Action by loosening the Button Headed Wedge Screw under the action using a 3/16 inch Allen wrench.

Figure 16
Removing the Grip Frame

Place the rifle upside down. Remove the Grip Frame by removing the Grip Frame Screw, using a 3/16 inch Allen screw. Pull the Grip Frame from the Forestock.

Remove the two Action Screws from the bottom of the Forestock using a 3/16 inch Allen wrench. Lift the Stock Assembly straight off the Action.

Figures 17 and 18
Removing the Buttstock

5. Removing the Buttstock from the Forestock. Remove the 2 Buttstock Screws at the right rear of the Forestock using a 3/16 inch Allen wrench. Pull the Buttstock down and to the rear to remove it.

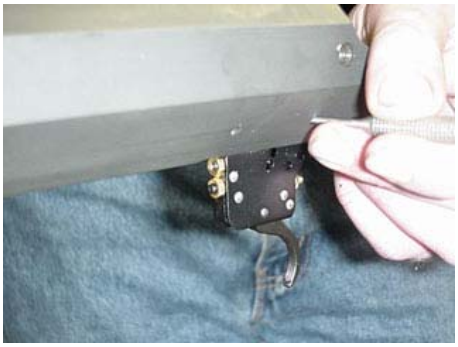


Figure 19 & 20
Removing the Trigger Group

8. Removing the Trigger Group. Drift the two Trigger Group Pins out of the receiver to remove the Trigger Group. The Trigger Group is not user-serviceable.

9. Removing the Muzzle Brake. The Muzzle Brake is held in place by its Lock Ring and Loc Tite. It is not intended to be readily removable.

B. Reassembly. Reverse the steps above. Tighten the Action Screws **very lightly**. Then tighten the Draw Bolt on the "bedding wedge" at the front of the Action. Finish by tightening the other two Action Screws. This assures that the Recoil Lug is seated properly.

C. Cleaning.

Improper cleaning ruins more firearms than extensive shooting does. The AR-30 will provide years of use with minimal cleaning and preservation.

Wipe the rifle free of dust with a dry rag. Further clean the surface with a rag bearing a small amount of solvent. Pay particular care to the interior of the Action. It should seldom be necessary to remove the Bolt for cleaning.

Note: The phosphated finish of a new bolt and receiver will make the movement of a new action seem rough. Movement of the bolt will become very slick as it these parts break in and are properly lubricated.

Use a pull-through device or a high quality cleaning rod to clean the bore. Use a proper caliber bore brush soaked with a good bore solvent. Pass it from the breech to the muzzle several times.

Pull a closely fitting patch soaked with solvent through the bore from the breech to the muzzle. Follow the solvent maker's instructions regarding soaking or waiting times. *Make sure that the patch is small enough to avoid being caught in the Muzzle Brake.* Pull dry patches through the bore in a similar manner to remove the solvent and dirt from the bore. Preserve the bore with a generous oiling. Apply the oil by pulling an oily patch trough the bore from breech to front.

Oil or lightly grease the narrow track in the receiver behind the bolt. The Sear surface of the Striker runs through this track and serves as a rear bolt guide. A "Q-Tip" or other such device will suffice.

Heat treat processes may produce dark areas of phosphate at the breech ring and bolt cam of the receiver. This is normal.

D. Preservation. Wipe the entire rifle with a slightly oily rag. Make sure that the bore is well oiled. Store in a container that contains no foam. (Foam absorbs moist air. Heating the container may drive moisture from the foam. It can then condense on a cool rifle.) Use a desiccant or Vapor Phase Inhibitor in the container to help prevent rust.

V. INSTALLATION OF ACCESSORIES

A. Telescopic Sight Base

An optional scope base is available from ArmaLite. This Base is specially made with special recoil lugs designed to defeat both lateral and longitudinal recoil forces and to engage the scope mounting holes on the receiver. The base is designed to accept ArmaLite's scope mounts, as well as most other Weaver type rings.

The base is supplied with four Socket Head Cap Screws for attachment to the base. To install the base:

Figure 21
The Scope Base

1. Remove the bolt group as instructed above.
2. Set the scope base on the receiver, with the recoil lugs of the base engaging the slots of the receiver.
3. Insert a screw in the rear hole and tighten it. Feel inside the receiver to determine if the screw passes all the way through the receiver roof. If it does, shorten the screw until it won't protrude.
4. Repeat the process with the other screws.
5. You may apply Loctite or any other thread cement to the screw threads if you wish. It is not necessary.

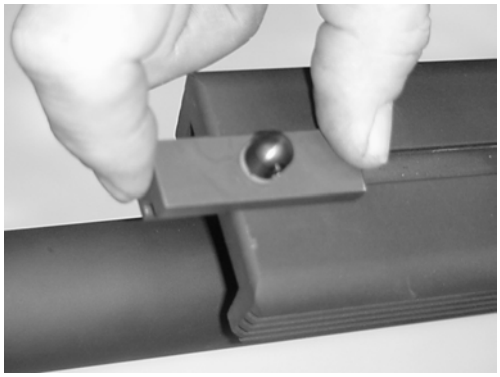
Figure 22
Attaching the ArmaLite Scope Mount

B. Attaching the ArmaLite Scope Mount or Rings: The Scope Mount will accept ArmaLite Mounts or Rings. They are equipped with a positioning cross-rail. Select a location on the Scope Rail, and attach the Scope Mount with the cross-rail engaging a slot in the rail. Tighten the Mount until you feel a slight "stick" or "catch" in rotation of the Mount Knob. That catch is an elastomer ring locking the Knob. The Knobs need not be tightened harshly to work perfectly, and overenthusiastic tightening can damage the Mount or Knob.

C. Bipod Adapter

The AR-30 can be fired from a rest or bipod. An optional Bipod Adapter is available with which to mount Harris or other bipods. To install the Bipod Adapter:

1. Screw the Sling Swivel Lug into the adapter, stopping when the hole in the lug is at right angles to the adapter.



Figures 23 and 24
Installing the Bipod

2. Insert the small rail of the Adapter into the front of the accessory slot running along the bottom of the Forestock. Slide the Adapter to the desired position.

3. Follow the Harris instructions to attach the Bipod to the Adapter. Tightening the Bipod will secure the Adapter in place on the Forestock. The Bipod may be attached to the Adapter when it is slid into the Stock, as illustrated. When shooting, lean forward into the bipod slightly.

VI. AMMUNITION

Use only clean, high quality ammunition, in good condition. All U.S. military ammunition and commercial equivalents are acceptable.

Ammunition employing sabots cannot be fired in any AR-30 that has a muzzle break. The sabot can cause damage to the muzzle brake.

VII. SUGGESTIONS

ArmaLite appreciates recommendations for changes or improvements to this operator's manual. Please mail or fax your suggestions to ArmaLite at the address on the cover.